cessful in improving A-V conduction in patients with complete heart block due to myocarditis or acute myocardial infarction.

The trisodium salt of ethylenediamine tetraacetic acid, a calcium-chelating agent, has been used in the treatment of complete heart block due to digitalis intoxication when electrical pacing is unavailable.

Pacemaker therapy. Because of the unpredictable, potentially fatal nature of Stokes-Adams attacks and the inconsistent results and frequent complications with drug therapy, electrical pacing has become the treatment of choice when syncope occurs in patients with complete heart block.

The general indications for pacemaker insertion include (1) complete heart block associated with congestive heart failure (2) complete heart block with Stokes-Adams syncope (3) complete heart block following acute anterior or inferior wall myocardial infarction (4) partial A-V block (second degree block) complicating anterior wall myocardial infarction and (5) postsurgical complete heart block.

Recent reports have demonstrated the feasibility of suppressing episodes of ventricular tachycardia and fibrillation in patients with normal A-V conduction by pacing the atrium or the ventricle at a rate faster than that present between episodes of ventricular tachyarrhythmia. Electrical pacing has been employed successfully in combination with propranolol and cardiac sympathectomy in the treatment of otherwise unresponsive ventricular arrhythmias. Rapid atrial pacing has been used successfully in the treatment of supraventricular tachycardias including atrial flutter and paroxysmal atrial tachycardia.

In patients with syncopal attacks due to ventricular tachycardia or ventricular fibrillation complicating complete heart block, the emergency insertion of a ventricular pacemaker is strongly indicated. A ventricular pacemaker is the only means available for the long-term prevention of ventricular tachyarrhythmias in patients with heart block. If transient ventricular asystole complicates complete heart block a ventricular pacemaker is also indicated. A single Stokes-Adams attack in a patient with complete heart block is sufficient reason for pacemaker insertion.

Selected Items from the FDA Drug Bulletin

Nitroglycerin Packaging Affects Potency

A recent FDA assay survey of nitroglycerin tablets suggests that improper packaging has a crucial bearing on the drug's stability and potency.

The assay involved nitroglycerin tablets stored in a pen-shaped plastic container provided by pharmacies as a convenient means of carrying several days' supply. Dispensers containing the drugs were left standing at room temperature for 1-, 2-, and 3-day periods.

The nitroglycerin was found to have decreased to about 50 percent, 30 percent and 20 percent of initial potency after being left in the dispensers for these periods. FDA has requested recall of the dispensers.

The assay led FDA to conclude that unexplained patterns of therapeutic response by patients to nitroglycerin therapy may be caused by the manner in which the drug is packaged. Physicians should consider this possibility when evaluating patient response to the drug.

To avoid rapid loss of potency, nitroglycerin should be kept at all times in tightly-sealed glass vials. Physicians and pharmacists may wish to tell patients this when prescribing and dispensing the drug.

—FDA Drug Bulletin, Feb 1972

Imipramine and Alleged Birth Defects

Recent alarm about possible implication of imipramine (Tofranil®), an anti-depressant drug, in birth defects (amelia and phocomelia) appears to be without firm foundation. A report of an association between imipramine given pregnant mothers and congenital deformities in their offspring came from Australia in early March.

The Australian Department of Health recently informed FDA that it regards as inconclusive the data on which the report was based. In addition, the Department of Health and Social Security in London told FDA that during the eight years the British Committee on Safety of Drugs has been in operation, only one report of congenital abnormality of a limb associated with imipramine has been received. Amelia and phocomelia occasionally occur without known association with drugs.

FDA-approved imipramine labeling in use since 1965 contains the following warning: "Safe use of imipramine during pregnancy and lactation has not been established; therfore, in administering the drug to pregnant patients, nursing mothers, or women of childbearing potential, the potential benefits must be weighed against the possible hazards. Animal reproduction studies have yielded inconclusive results. There have been clinical reports of congenital malformation associated with the use of this drug, but a causal relationship has not been confirmed."

—FDA Drug Bulletin, May 1972

Iodochlorhydroxyquin and Travelers' Diarrhea

The Food and Drug Administration recommends that iodochlorhydroxyquin (Entero-Vioform®) not be given to prevent "travelers' diarrhea."

FDA's conclusion is based on recent findings in Japan, Australia and Sweden implicating iodochlorhydroxyquin as the cause of a frequently severe neurologic complex, subacute myleo-optic neuropathy (SMON). Evidence is not yet available to confirm this association, but it appears that too-long-continued dosing with iodochlorhydroxyquin may be a major factor in SMON.

There is no acceptable evidence that other halogenated hydroxyquinolines, chiniofon and diiodohydroxyquinoline (Diodoquin®), are effective in the treatment of prevention of "travelers' diarrhea."

Travelers to areas where hygiene and sanitation are poor may be able to prevent diarrhea by eating only recently peeled or thoroughly cooked foods, and by drinking only boiled or bottled water, bottled carbonated soft drinks, beer or wine. Tap water used for brushing teeth or for ice in drinks may be a source of infection. The cause of the diarrhea is uncertain.

Most tropical disease specialists believe iodochlorhydroxyquin is ineffective for "travelers' diarrhea." Labeling of the product cites only intestinal amebiasis as an indication.

—FDA Drug Bulletin, May 1972

Methadone for Heroin Addiction

FDA plans to sanction increased use of methadone as a substitute for heroin. Maintenance treatment of patients 18 years and older with oral dosage forms of methadone will be available at about 450 Drug Addiction Centers throughout the United States. Each center is being inspected by health officials and is subject to FDA approval.

To control illicit traffic in methadone, the drug will be available only in approved centers and hospital pharmacies. Accurate record-keeping for the drug will be required. These restrictions do not prohibit use of methadone in the treatment of severe pain or for detoxification of addicts in hospitals.

Methadone taken by mouth prevents heroin withdrawal symptoms and, in general controls the intense desire or need for heroin. Addicts who stay on methadone maintenance programs are often able to return to a normal life pattern.

FDA's decision was made after consultation with the National Institute of Mental Health and the Justice Department's Bureau of Narcotics and Dangerous Drugs, and was endorsed by The Special Action Office for Drug Abuse Prevention of the White House. FDA also had the advice and opinion of many other groups, such as the AMA's Council on Mental Health. The consensus is that current evidence on the safety and effectiveness of methadone is sufficient to permit its use for narcotic addiction in adults.

—FDA Drug Bulletin, May 1972